



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,099	02/27/2004	Takuya Kadota	Q80152	5064
23373	7590	06/28/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			DOTE, JANIS L	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/787,099

Applicant(s)

KADOTA ET AL.

Examiner

Janis L. Dote

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/19/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1756

1. The drawings filed on Jul. 19, 2004, are not acceptable. The drawings are not in compliance with 37 C.F.R. 1.121, because they are not properly identified in the top margin as "Replacement Sheet," as required under 37 C.F.R. 1.121(d).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheets should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures.

2. The disclosure is objected to because of the following informalities:

The use of trademarks, e.g., Henschel mixer [sic: HENSCHEL MIXER] at page 68, line 12, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Art Unit: 1756

Appropriate correction is required.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1756

6. Claims 3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,753,399 (Hayase).

Hayase discloses an electrophotographic image forming apparatus that meets the structural components recited in instant claims 3 and 7. The apparatus shown in Fig. 5 comprises a photosensitive drum 1, i.e., an image carrier on which an electrostatic latent image is formed, a charging roller 2, an exposure unit 3, a developing unit 4-1, a transfer belt 10, and a heat-pressure fixing unit 25. The heat-pressure fixing unit 25 comprises a heating roller 14 and a pressure roller 15, which fixes a toner image to a recording medium without applying an offset-preventing agent such as silicone oil on the heating roller. In other words, the two rollers are oil-less. Fig. 5, and col. 14, lines 63-67, col. 15, lines 29-34 and 53-66, col. 18, lines 22-57.

Hayase does not exemplify the particular toners recited in the instant claims. However, the instant claims do not positively recite that the apparatuses comprise the particular toners. Instant claims 3 and 7 merely recite "a developing unit which develops the electrostatic latent image on the image carrier to form a toner image by a toner." The particular toners recited in the instant claims do not distinguish the structural elements in the instantly claimed apparatuses from

Art Unit: 1756

those in the apparatus in Hayase. A material (i.e., the toner) worked upon by the apparatus does not limit the apparatus claims. "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." See MPEP 2115. It is well settled, as stated in Ex parte Masham, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987) that "a recitation with respect to the material intended to be worked upon by a claimed apparatus does not impose any structural limitations upon the claimed apparatus which differentiates it from the prior art apparatus satisfying the structural limitations of that claimed." Accordingly, the particular toners recited in the instant claims do not distinguish the instantly claimed apparatus from Hayase.

7. Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 2002/0051924 A1 (Iida), as evidenced by applicants' admissions at page 5, lines 2-9 and 14-19, page 76, lines 1-12, page 77, lines 1-5, 7-9, 11-14, 16-17, and 20-22, page 77, line 25, to page 78, line 1, page 88, lines 1-12, page 88, line 25, to page 89, line 12, page 89, lines 16-18, page 90, lines 5-6, 12-13, and 20-21; and Tables 1A and 1B at pages 75 and 87, respectively.

Art Unit: 1756

Iida discloses a toner comprising a binder resin, a colorant, and 4 parts by weight of wax A, i.e., a release agent. See example 1, cyan toner (1) in paragraphs 0178-0181. The amount of wax A is within the releasing agent amount recited in instant claims 2 and 6. Iida further discloses an image-forming apparatus that comprises a photosensitive drum 1, i.e., an image carrier on which an electrostatic latent image is formed, a corona charger 2, a laser-exposure optical system (3a, 3b, and 3c), developing units 4Y, 4C, 4M, and 4B, a transfer unit 5, and a fixing unit 9. Fig. 1, paragraphs 0120-121. Fig. 2 illustrates a fixing device that comprises a fixing roller 39 and a pressing roller 40. The two rollers can be oil-free in the case of no oil application, where the cleaning device C in the fixing device is removed. Paragraphs 0132-134 and paragraph 0182. The structural components in the Iida apparatus meet the structural components recited in instant claims 3 and 7.

Iida does not disclose that the toner has the storage modulus properties recited in instant claims 1, 4, and 5. However, Iida discloses that in a oil-less fixing device, the toner exhibits a low temperature fixability of 115°C, and a region of no offset between 115 to 230°C, i.e., a minimum non-offset temperature of 115°C. The toner also provides OHP, i.e.,

Art Unit: 1756

overhead projection, images having excellent transparency.

Paragraphs 0184-0187; and Table 5-1 at page 18, example 1.

These properties appear to the same properties sought by applicants.

The instant specification at page 5, lines 2-9, discloses that an "object of a first aspect of the present invention . . . is to provide a toner which can effectively improve low temperature fixing stability and offset resistance of a toner by using dynamic viscoelastic characteristics more conformable for actual toner behavior in fixation by heating." The instant specification at page 5, lines 14-19, discloses that another "object [of] a second aspect of the present invention . . . is to provide a toner which can effectively improve fixing stability and offset resistance to a toner by using dynamic viscoelastic characteristics more conformable to actual toner behavior in fixation by heating."

The instant specification shows that in an oil-less fixing device, some toners that meet the storage modulus properties recited in instant claim 1 and the amount of releasing agent recited in instant claim 2 exhibited a low temperature offset and a "minimum temperature of good fixing rate" of 160°C or less; while other toners that meet the storage modulus properties recited in instant claim 1 and the amount of releasing agent



Art Unit: 1756

recited in instant claim 2 exhibited a low temperature offset and a "minimum temperature of good fixing rate" of "higher than 160°C and lower than 180°C." The toners provided images having good results in transparency. See Table 1A at page 75 of the instant specification, examples 1A to 3A; page 76, lines 1-12; and page 77, lines 1-5, 11-14, and 20-22.

Toners that do not possess the storage modulus properties recited in instant claim 1, but which meet the releasing agent amount recited in instant claim 2, exhibited a low temperature offset and a "minimum temperature of good fixing rate" of 180°C or higher. Some of the toners provided images having good transparency, while other toners yielded inferior results in transparency. See Table 1A at page 75, examples 5A and 7A; and page 76, lines 1-12; page 77, lines 7-9 and 16-17; and page 77, line 25, to page 78, line 1.

The instant specification also shows that in an oil-less fixing device, some toners that meet the storage modulus limitations recited in instant claims 4 and 5 and the amount of releasing agent recited in instant claim 6 exhibited a hot offset temperature of 200°C or higher and a "minimum temperature of good fixing rate" of 160°C or less; while other toners that meet the storage modulus limitations recited in instant claims 4 and 5 and the amount of releasing agent recited in instant

Art Unit: 1756

claim 6 exhibited a hot offset temperature of "higher than 180°C and lower than 200°C" and a "minimum temperature of good fixing rate" of 160°C or less. The toners provided images having good results in transparency. See Table 1B at page 87 of the instant specification, examples 2B and 3B; page 88, lines 1-12; page 88, line 25, to page 89, line 2; and page 89, lines 7-10, and 16-18.

A toner that does not possess the storage modulus limitations recited in instant claims 4 and 5, but which meets the amount of releasing agent recited in instant claim 6, provided images with "good transparency" and exhibited a hot offset temperature of 200°C or higher and a "minimum temperature of good fixing rate" of 180°C or higher. See Table 1B at page 87, example 5B; and page 89, lines 1-12; page 90, lines 5-6, 12-13, and 20-21.

Thus, because the toner disclosed in Iida appears to provide the same properties sought by applicants, it is reasonable to presume that the toner disclosed by Iida has the storage modulus properties recited in instant claims 1, 4, and 5. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

Art Unit: 1756

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1 and 2 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/787,147 (Application'147), as evidenced by that portion of the disclosure in Application'147 that supports the subject matter claimed in Application'147, and applicants' admissions in examples 2A to 4A and Fig. 2 of the instant specification.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter in Application'147 renders obvious the toner recited in the instant claims.

Art Unit: 1756

Reference claim 1 recites a toner comprising a binder resin and at least a colorant and having a variation of its "storage modulus ( $G'(\text{NL})$ ) in a nonlinear region at  $180^{\circ}\text{C}$  during 200 seconds, in step strain measurement of from a linear region to a nonlinear region of viscoelastic characteristics, of from 12 to  $100 \text{ dyn/cm}^2$ ." Reference claim 3, which depends on reference claim 1, requires that the toner further comprise a releasing agent in an amount of 4 parts by weight or less per 100 parts by weight of binder resin, which meets the toner composition limitation recited in instant claim 2.

Reference claim 5 recites a toner comprising a binder resin and at least a colorant and having a "loss modulus ( $G''(\text{NL})$ ) in a nonlinear region at  $180^{\circ}\text{C}$ , in step strain measurement of from a linear region to a nonlinear region of viscoelastic characteristics, of from 1,000 to  $4,000 \text{ dyn/cm}^2$ ." Reference claim 6, which depends on reference claim 5, requires that the toner comprise a releasing agent in an amount of 4 parts by weight or less per 100 parts by weight of binder resin, which meets the toner composition limitation recited in instant claim 2.

The claims of Application'147 do not recite that the toner has a "storage modulus ( $G'(\text{L1})$ ) in a linear region and a storage modulus ( $G'(\text{NL})$ ) in a nonlinear region at  $180^{\circ}\text{C}$ , in a step strain

Art Unit: 1756

measurement of from a linear region to a nonlinear region of viscoelastic characteristics, satisfying the relationships of  $G' (L1)/G' ((NL)$  is from 5 to 20, and  $G' (NL)$  is from 100 to 400 dym/cm<sup>2</sup>" as recited in instant claim 1. However, that portion of Application'147 that supports the toners recited in references claims 1, 3, 5, and 6 exemplifies toners that appear to be identical to the toners exemplified in the instant specification that support the toners recited in instant claims 1 and 2. Compare Application'147 toners 5A, 1B, 2B, and 5B, with the instant specification toners 3A, 2A, 3A, and 4A, respectively. In addition, Fig. 3 in Application'147 shows "an example of the behavior of the toner of the present invention having dynamic viscoelasticity of temperature-dependency before fixing nip [,] at fixing nip part, and at the outlet of fixing nip of a heating fixing unit" that appears to be identical to Fig. 2 of the instant specification. Fig. 2 of the instant specification shows the dynamic viscolasticity characteristics of an example of the instant invention. Fig. 3 of Application'147 shows that the toners claimed in Application'147 have the same storage modulus characteristics as the toners recited in the instant claims. When addressing the use of whether a claim in the application defines an obvious variation of an invention claimed in a patent, "those portions

Art Unit: 1756

of the specification which support the patent claims may also be examined and considered." See MPEP 804,II.B.1, pp. 800-22 to 800-23, citing In re Vogel, 164 USPQ 619, 622 (CCPA 1970). Thus, because the toners disclosed in Application'147 that support the toners claimed in Application'147 have the same composition as the toners that support the toners recited in instant claims 1 and 2 disclosed in the instant specification, it is reasonable to presume that the toners claimed in Application'147 have the storage modulus properties recited in instant claims 1 and 2. In other words, the two set of toners appear to be the same material. The burden is on applicants to prove otherwise. Fitzgerald, supra.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter claimed in Application'147 and that portion in Application'147 that supports the subject matter claimed in Application'147, to make and use a toner as recited in the instant claims 1 and 2 because that person would have had a reasonable expectation of successfully obtaining a toner that is capable forming toned images.

10. Claims 4-6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being

Art Unit: 1756

unpatentable over claims 1-8 of copending Application No. 10/787,147 (Application'147), as evidenced by that portion of the disclosure in Application'147 that supports the subject matter claimed in Application'147, and applicants' admissions in examples 2B and 3B and Fig. 2 of the instant specification.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter in Application'147 renders obvious the toner recited in the instant claims.

Reference claims 1 and 5 recite toners as described in paragraph 9 above, which are incorporated herein by reference. Reference claims 3 and 6, which depend from reference claims 1 and 5, respectively require that the toner further comprise a releasing agent in an amount that is within the range recited in instant claim 6.

The claims of Application'147 do not recite that the toners have a "storage modulus ( $G' (L2)$ ) in a linear region at 180°C, in a step strain measurement of from a nonlinear region to a linear region of viscoelastic characteristics, of from 400 to 2,000 dym/cm<sup>2</sup>" as recited in instant claim 4. Nor do the claims

Art Unit: 1756

of Application'147 recite that the toners have a ratio of the "storage modulus ( $G'(L2)$ ) to the storage modulus ( $G'(NL)$ ) in a strain measurement of from a nonlinear region to a linear region of viscoelastic characteristics, of from 3 to 8" as recited in instant claim 5. However, that portion of Application'147 that supports the toners recited in references claims 1, 3, 5, and 6 exemplifies toners that appear to be identical to the toners exemplified in the instant specification that support the toners recited in instant claims 4-6. Compare Application'147 toners 2A, 5A, and 2B with the instant specification toners 2B and 3B, respectively. In addition, Fig. 3 in Application'147 shows "an example of the behavior of the toner of the present invention having dynamic viscoelasticity of temperature-dependency before fixing nip [,] at fixing nip part, and at the outlet of fixing nip of a heating fixing unit" appears to be identical to Fig. 2 of the instant specification. Fig.2 of the instant specification shows the dynamic viscolasticity characteristics of an example of the instant invention. Fig. 3 of Application'147 shows that the toners recited in the claims in Application'147 have the same storage modulus characteristics as the toner recited in the instant claims. When addressing the use of whether a claim in the application defines an obvious variation of an invention claimed in a patent, "those portions



Art Unit: 1756

of the specification which support the patent claims may also be examined and considered." See MPEP 804,II.B.1, pp. 800-22 to 800-23, citing In re Vogel, 164 USPQ 619, 622 (CCPA 1970).

Thus, because the toners disclosed in Application'147 that support the toners claimed in Application'147 have the same composition as the toners disclosed in the instant specification that support the toners recited in instant claims 4-6, it is reasonable to presume that the toners claimed in Application'147 have the storage modulus properties recited in instant claims 4-6. The burden is on applicants to prove otherwise. Fitzgerald, supra.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter claimed in Application'147 and that portion in Application'147 that supports the subject matter claimed in Application'147, to make and use a toner as recited in the instant claims 4-6 because that person would have had a reasonable expectation of successfully obtaining a toner that is capable forming toned images.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

Art Unit: 1756

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD  
Jun. 22, 2005

*Janis L. Dote*  
JANIS L. DOTE  
PRIMARY EXAMINER  
GROUP 1500  
1700